We claim:

1. An aqueous coating composition having improved adhesion to friable surfaces comprising:

(a) an emulsion polymer having a glass transition temperature of -20° C to 100° C and an average particle diameter less than 120 nanometers, said emulsion polymer consisting essentially of:

(i) at least one copolymerized ethylenically unsaturated nonionic monomer, each of said nonionic monomer(s) having a water solubility less than 8%; and

(ii) at least one copolymerized acid monomer, such that the acid number of said emulsion polymer is 30 to 100; and

(b) 0.25-10%, by weight based on said emulsion polymer weight, nonionic surfactants selected from the group consisting of water-soluble alkyl phenol ethoxylates, alkyl alcohol ethoxylates, and mixtures thereof.

2. The coating composition of claim 1 wherein the acid number of said emulsion polymer is 39 to 50.

3. The coating composition of claim 1 wherein the average particle diameter of said emulsion polymer is less than 80 nanometers.

4. An aqueous coating composition having improved adhesion to friable surfaces comprising:

(a) an emulsion polymer having a glass transition temperature of -20°C to 100°C and an average particle diameter less than 120 nanometers, said emulsion polymer consisting essentially of:

(i) 8-99.5%, by weight based on said emulsion polymer weight, of at least one copolymerized ethylenically unsaturated first nonionic monomer, each of said first nonionic monomer(s) having a water solubility of at least 8%;

(ii) 0-91.5%, by weight based on said emulsion polymer weight, of at least one copolymerized ethylenically unsaturated second nonionic monomer, each of said second nonionic monomer(s) having a water solubility of less than 8%; and

(ii) at least 0.5%, by weight based on said emulsion polymer weight, of at least one copolymerized acid monomer, such that the acid number of said emulsion polymer is 4 to 100; and

(b) 0.25-10%, by weight based on said emulsion polymer weight, nonionic surfactants selected from the group consisting of water-soluble alkyl phenol ethoxylates, alkyl alcohol ethoxylates, and mixtures thereof.

5. The coating composition of claim 4 wherein the average particle diameter of said emulsion polymer is less than 80 nanometers.

6. A method for improving the adhesion of a dried aqueous coating composition to a friable surface comprising:

(1) forming an aqueous coating composition comprising:

(a) an emulsion polymer having a glass transition temperature of -20°C to 100°C and an average particle diameter less than 120 nanometers, said emulsion polymer consisting essentially of:

(i) at least one copolymerized ethylenically unsaturated nonionic monomer, each of said nonionic monomer(s) having a water solubility less than 8%; and

(ii) at least one copolymerized acid monomer, such that the acid number of said emulsion polymer is 30 to 100; and

(b) 0.25-10%, by weight based on said emulsion polymer weight, nonionic surfactants selected from the group consisting of water-soluble alkyl phenol ethoxylates, alkyl alcohol ethoxylates, and mixtures thereof; and

(2) applying said aqueous coating composition to a surface; and

(3) drying, or allowing to dry, said aqueous coating composition.

7. The method of claim 6 wherein the acid number of said emulsion polymer is 39 to 50.

8. The method of claim 6 wherein the average particle diameter of said emulsion polymer is less than 80 nanometers.

9. A method for improving the adhesion of a dried aqueous coating composition to a friable surface comprising:

(1) forming an aqueous coating composition comprising:

(a) an emulsion polymer having a glass transition temperature of -20°C to 100°C and an average particle diameter less than 120 nanometers, said emulsion polymer consisting essentially of:

(i) 8-99.5%, by weight based on said emulsion polymer weight, of at least one copolymerized ethylenically unsaturated first nonionic monomer, each of said first nonionic monomer(s) having a water solubility of 8% or more;

(ii) 0-91.5%, by weight based on said emulsion polymer weight, of at least one copolymerized ethylenically unsaturated second nonionic monomer, each of said second nonionic monomer(s) having a water solubility of less than 8%; and

(ii) at least 0.5%, by weight based on said emulsion polymer weight, of at least one copolymerized acid monomer, such that the acid number of said emulsion polymer is 4 to 100; and

(b) 0.25-10%, by weight based on said emulsion polymer weight, nonionic surfactants selected from the group consisting of water-soluble alkyl phenol ethoxylates, alkyl alcohol ethoxylates, and mixtures thereof; and

(2) applying said aqueous coating composition to a surface; and

(3) drying, or allowing to dry, said aqueous coating composition.

10. The method of claim 9 wherein the average particle diameter of said emulsion polymer is less than 80 nanometers.